

blood of all the animals he examined, and in all the bloodvessels indiscriminately. His observations were conducted on the blood of man, oxen, swine, rabbits, pigeons, and fish; frogs' blood, for a time, formed the only exception. This observer believes that the crystallizable substance is contained in the blood-corpuscles; he has procured crystals from the filtered washings of the blood-cake, and states that he found them more perfect the more the corpuscles were freed from serum and fibrin. With regard to the influence of temperature, he has observed that the slower the evaporation takes place, the more complete will the crystals be; but if it be required to produce them quickly, the temperature may be slightly raised, but it must not be carried to the point at which the albumen coagulates. In subsequent experiments on frogs' blood, he procured crystals by the addition of a very considerable quantity of water, at a very low temperature; the quantity of the crystals was proportionately smaller than in other specimens of blood, and they are always colourless when thus obtained. From blood four months old, and also from dried blood, he has succeeded in forming crystals.—*Brit. and For. Med.-Chir. Rev.* April, 1854, from *Zeitsch. für Rat. Med.* Bd. iii.

5. *Hämin Crystals.*—By this name TEICHMANN designates crystals obtained by treating the mass of dried blood-corpuscles in hydrochloric, acetic, oxalic, tartaric, citric, or lactic acids, under a glass cover in a temperature of 20° to 50° R. These crystals have a yellow, brick-red, brown, or black colour; they form rhombic prisms, or sometimes stellæ, needles, or granules, like those of black pigment. They are insensible to the action of air, and are insoluble in water, ether, alcohol, acetic, hydrochloric, and nitric acids; in boiling nitric acid, however, they are entirely dissolved; they are soluble in dilute liquor potassæ, but become blackened in this fluid when concentrated; concentrated sulphuric acid, and still more readily ammonia, dissolves them. To the substance which undergoes this form of crystallization, and which he supposes to be derived from the blood-corpuscles, he gives the name of Hämin; he considers it to be different from the hæmatin of fresh blood, which is soluble in water, and also from the hæmatoidin forming the crystals described by Zwicky and Virchow. He has obtained Hämin crystals in the blood of various animals. Finally, he considers the black pigments as forms of undeveloped crystals in different degrees of oxidation. As a practical result of the knowledge of the properties of Hämin, he suggests the employment of the above manipulations to obtain crystals in cases of suspicious spots and stains.—*Ibid.*

6. *Influence of Cod-Liver Oil and Cocoa-Nut Oil on the Blood.*—Dr. THEOPHILUS THOMPSON read before the Royal Society (April 27, 1854,) a paper on this subject.

He found, that during the administration of cod-liver oil to phthisical patients their blood grew richer in red corpuscles, and he refers to a previous observation of Dr. Franz Simon to the same effect. The use of almond-oil and of olive-oil was not followed by any remedial effect; but from cocoa-nut oil, results were obtained almost as decided as from the oil of the liver of the cod, and the author believes it may turn out to be a useful substitute. The oil employed was a pure cocoa oleine, obtained by pressure from crude cocoa-nut oil, as expressed in Ceylon and the Malabar coast from the Copperah or dried cocoa-nut kernel, and refined by being treated with an alkali, and then repeatedly washed with distilled water. It burns with a faint blue flame, showing a comparatively small proportion of carbon, and is undrying. The analysis of the blood was conducted by Mr. Dugald Campbell. The whole quantity abstracted having been weighed, the coagulum was drained on bibulous paper for four or five hours, weighed, and divided into two portions. One portion was weighed, and then dried in a water-oven, to determine the water. The other was macerated in cold water until it became colorless, then moderately dried, and digested with ether and alcohol, to remove fat; and, finally, dried completely, and weighed as fibrin. From the respective weights of the fibrin, and the dry clot, that of the corpuscles was calculated. The following were the results observed

in seven different individuals affected with phthisis in different stages of advancement:—

	Red corpuscles.	Fibrin.
First stage, before the use	Female 129.26	4.52
of cod-liver oil ...	Male 116.53	13.57
First stage, after the use	Female 136.47	5.00
of cod-liver oil ...	Male 141.53	4.70
Third stage, after the use	Male 138.74	2.23
of cod-liver oil ...		
Third stage, after the use	Male 139.95	2.31
of cocoa-nut oil ...	Male 144.94	4.61

Med. Times & Gaz. June 10, 1854.

MATERIA MEDICA AND PHARMACY.

7. *Experiments on the Preparations of Squill.*—Dr. CHATEAU has instituted a series of experiments, with the view of replying to a question proposed by the Faculty of Medicine of Paris: “*Determine by clinical observations what are the effects of the preparations of squill.*” In a *résumé* of the memoir presented to the Academy, M. Chateau states the powder, wine, vinegar, and oxymel of squills were employed; but the powder, most frequently, on account of its action not being interfered with by any other constituent of the medicine.

His first *experiments were made upon seven dogs*, to whom he administered quantities of the squill varying from 40 grammes of the powder to 1 gramme, or their equivalent, of the wine of squill. In one of these experiments, 1 gramme of soft extract of squill was injected into the subcutaneous cellular tissue; in all the other experiments, the drug was introduced into the stomach. The effects produced were the following: The animals became dull, and this was followed by increase of the buccal secretions, nausea, efforts at vomiting, and by semi-liquid stools passed in small quantities; when the dose was sufficiently large, tremblings supervened, and paralysis of the posterior limbs, which soon extended to the anterior. After this, the animals appeared to regain their equilibrium, and then suddenly a convulsive attack occurred; they fell upon their side; there were some movements of deglutition, a little orthotonos, and death in from thirty-five minutes to one hour and fifty-five minutes after administration of the drug. When the dose was small, the same series of phenomena was exhibited, but more tardily; and death was delayed for twelve or fifteen hours. In all the experiments there was a remarkable diminution of the temperature of the body, as taken in the rectum, believed to be due to the hyposthenic action of the squill upon the nervous system. On *examination of the bodies after death*, the viscera were found congested, the blood black and thick, the bladder empty, or containing but little urine, the ganglia of the great sympathetic reddened, the cerebrum little altered, but the cerebellum and spinal cord softened sometimes even to diffuence.

M. Chateau next relates the results of his *observations on the human subject in disease*, which had reference principally to the diuretic and laxative operation of the drug. He administered it in 4 cases of pulmonary emphysema, in 3 cases of albuminuria, 3 cases of abdominal dropsy, 1 of which was ovarian, 2 cases of pleurisy, 2 cases of pneumonia, 2 cases of phthisis, and several cases of rheumatism, only 1 of which is related in the original memoir. In these 17 cases, the operation of the squill was as follows: in 7, it proved *diuretic and purgative*; in 2, simply *diuretic*; in 2, simply *purgative*; in 4, *expectorant*; in 1, *diuretic and expectorant*; and in 1 no effect was observed.

He noticed that when either the purgative or diuretic operation became excessive, the other immediately ceased.

The number of cases of each disease in which the squill was administered was too small to warrant the general therapeutical conclusions drawn by Dr. Chateau; we shall therefore content ourselves with noticing two points of in-